

**REMARKS****Interview**

Applicants would like to thank Examiner Ibrahim for the phone conference held with Applicants' representative. During the phone interview, the Examiner proposed amendments to the claims for overcoming the rejections. Applicants have considered the proposed amendments and have incorporated a number of the suggested amendments into the claims.

**Status of the Claims**

Claims 68-94 are currently pending in the present application. Claims 1-67 have been canceled without prejudice or disclaimer of the subject matter claimed therein. New claims 68-94, directed to the same invention as claims 23, 25, 26, 28-38, 40-42, 44-48, and 56-67, have been added.

**Amendments to the Claims**

New claims 68-94 supply separate specific embodiments of the claimed invention, based on specific product characteristics. The new claims do not introduce prohibited new matter. Representative support for new claims 68-94 is summarized in the table below.

<b>Claim(s)</b>	<b>Representative Support</b>
68 to 71	original claim 23
72	original claim 25
73	original claim 28
74	original claim 30
75	original claim 31
76	original claim 32
77	original claim 33
78	original claim 34
79	original claim 37
80	original claim 38
81	original claim 41
82	original claim 56
83	original claim 58
84	original claim 59
85	original claim 60
86	original claim 61
87	original claim 62

88	original claim 63
89	original claim 64
90	original claim 65
91	original claim 57
92	original claim 47
93	original claim 48
94	original claim 42

### Objections to the Claims

Claims 26, 45, and 46 were objected to for failing to further limit the claim from which they depend.

Claims 26, 45, and 46 have been canceled. Accordingly, the objection is deemed to be moot.

### Rejections Under 35 U.S.C. § 112, First Paragraph

A. Claims 23, 25, 26, 28-34, 37, 38, 41, 42, 45-48, and 56-67 were rejected under 35 U.S.C. § 112, first paragraph, because the specification does not enable the breadth of the claims.

The Office Action alleges that the specification enables an isolated nucleic acid sequence encoding SEQ ID NO: 8, the nucleic acid of SEQ ID NO: 1, host cells/plants/parts/seed comprising said nucleic acid sequences, and a method for transforming a plant/cell with said nucleic acid sequence, but does not reasonably enable a nucleic acid that hybridizes to a nucleic acid encoding SEQ ID NO: 8, a nucleic acid encoding a polypeptide having at least 40% sequence identity to SEQ ID NO: 8, or a nucleic acid fragment having ten contiguous bases of SEQ ID NO: 1-7 and 10.

Claims 23, 25, 26, 28-34, 37, 38, 41, 42, 45-48, and 56-67 have been canceled and replaced with new claims 68-94. Claim 68 is directed to a nucleic acid that encodes an *Arabidopsis thaliana* nuclear transporter and hybridizes under stringent conditions to SEQ ID NO: 1 or 2. Claims 69-94 are dependent upon claim 68 and therefore include the features of claim 68.

Applicants respectfully point out that SEQ ID NO: 1 encodes PUP1 and SEQ ID NO: 2 encodes PUP2. PUP1 and PUP2 have been shown to be functionally active nuclear transporter by Examples 1-6 of the specification and by Burkle *et al.* (The Plant Journal, 34:13-26, 2003;

attached to response of October 17, 2005). Applicants also point out that PUP3 encoded by SEQ ID NO: 10 is also a nuclear transporter. Although PUP3's nuclear transporter activity in yeast is not detectable under the conditions of Burkle *et al.*, the work of Burkle *et al.* does not suggest that PUP3 not a functional nuclear transporter.

Moreover, the claims as they stand are directed to nucleic acids from *Arabidopsis thaliana*. The hybridization conditions recited in the claims provide the structural features for the nucleic acids encompassed by the claims. The specification provides assays (see Examples 2 and 5) for determining whether a nucleic acid from *Arabidopsis thaliana* that hybridizes to SEQ ID NO: 1 or 2 under the recited conditions is a nuclear transporter. Also, assays for determining whether a protein is a nuclear transporter is well known in the art. Accordingly, it would not require undue experimentation to determine whether a nucleic acid from *Arabidopsis thaliana* that hybridizes to SEQ ID NO: 1 or 2 under the recited hybridization conditions is a nuclear transporter.

Therefore, given the examples and amount of guidance provided by the specification, the specification enables the claims as they stand.

B. Claims 23, 25, 26, 28-34, 37, 38, 41, 42, 45-48, and 56-67 were rejected under 35 U.S.C. § 112, first paragraph, because they contain subject matter that was not described in the specification in such a way as to convey to one skilled in the relevant art that the inventor(s) at the time the application was filed had possession of the claimed invention.

The Office Action alleges that the claims are directed to nucleic acid from any source encoding a protein having a low sequence identity to SEQ ID NO: 8 and that the specification has not described a representative number of nucleic acids falling within the scope of the claims.

Applicants urge that claims 23, 25, 26, 28-34, 37, 38, 41, 42, 45-48, and 56-67 have been canceled and replaced with new claims 68-94. Claim 68 is directed to a nucleic acid that encodes an *Arabidopsis thaliana* nuclear transporter and hybridizes under stringent conditions to SEQ ID NO: 1 or 2. Claims 69-94 are dependent upon claim 68 and therefore include the features of claim 68.

Moreover, Applicants respectfully point out that Example 9 of the *Revised Interim Written Description Guidelines Training Materials* (1999) discloses a claim with hybridization language. The claim was found to be adequately described even though the specification only

disclosed a single species, SEQ ID NO: 1. The reason is that the claim sets forth the hybridization conditions and one of skill in the art would not expect substantial variation among species encompassed within the scope of the claims. Likewise, claim 68 of the present application includes the feature that the claimed nucleic acid must hybridize under stringent conditions to the complement of a nucleic acid molecule encoding SEQ ID NO: 1 or 2 thereby limiting variation among the nucleic acid molecules encompassed within the scope of the claims.

The claims as they stand only encompass nucleic acids encoding *Arabidopsis thaliana* nuclear transporter that hybridize under stringent conditions to SEQ ID NO: 1 or 2. The specification discloses nucleic acids SEQ ID NO: 1-7 and 10 encoding proteins from *Arabidopsis thaliana* that are structurally related to a nuclear transporter. Moreover, the Examples of the present specification and the work of Burkle *et al.* (2003) confirm that SEQ ID NO: 1 and 2 encode nuclear transporter proteins that transport purines. Accordingly, the specification provides adequate written description of the claimed invention.

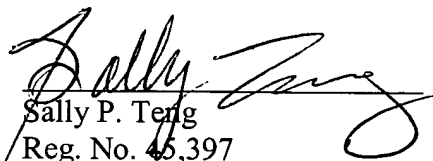
#### Conclusion

The foregoing amendments and remarks are being made to place the application in condition for allowance. Applicants respectfully request entry of the amendments, reconsideration, and the timely allowance of the pending claims. A favorable action is awaited. Should the Examiner find that an interview would be helpful to further prosecution of this application, they are invited to telephone the undersigned at their convenience.

If there are any additional fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

  
Sally P. Teng  
Reg. No. 45,397

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**Customer No. 009629**

**MORGAN, LEWIS & BOCKIUS LLP**

1111 Pennsylvania Avenue, NW

Washington, D.C. 20004

(202) 739-3000